

National Aeronautics and
Space Administration
Headquarters
Washington, DC 20546-0001



April 10, 2006

Reply to Attn of: **Office of Legislative Affairs**
LS:ls

MEMORANDUM FOR THE RECORD

Subject: Hearing before the House Science Committee, Subcommittee on Space and Aeronautics regarding The Future of Air Traffic Control: The R&D Agenda

Date: March 29, 2006.

Members

Present: **Republicans:**
Ralph Hall (TX), Acting Chairman
(Chairman Ken Calvert was ill)
Tom Feeney (FL)
Vernon Ehlers (MI)

Democrats:
Mark Udall (CO), Ranking Member
David Wu (OR)
Jim Costa (CA)
Sheila Jackson Lee (TX)

Witnesses:

- **The Honorable Jeffrey N. Shane**, Under Secretary of the U.S. Department of Transportation (DOT)
- **Dr. Lisa Porter**, Associate Administrator for Aeronautics Research Mission Directorate (ARMD), NASA.
- **Mr. Bob Pearce**, Acting Director of Joint Planning and Development Office (JPDO).
- **Mr. David Dobbs**, Assistant Inspector General for Aviation and Special Projects, U.S. Department of Transportation.
- **Mr. Mike Hudson**, chairman of the National Academy of Sciences' Committee on Technology Pathways: Assessing the Integrated Plan for the NGATS
- **Dr. Gerald Dillingham**, Director of Civil Aviation Issues at the Government Accountability Office

Hearing Summary:

On March 29, the House Space and Aeronautics Subcommittee held a hearing to examine the status of Federal research and development activities focused on the creation of the next generation air traffic control system. Rep. Ralph Hall (R-TX) chaired the hearing on behalf of Subcommittee Chairman Ken Calvert (R-CA) who was absent due to illness. The NASA witness was Dr. Lisa Porter, Associate Administrator for Aeronautics Research Mission Directorate. Other witnesses included: Jeffrey N. Shane, Under Secretary of the U.S. Department of Transportation (DOT); Bob Pearce, Acting Director of Joint Planning and Development Office (JPDO); David Dobbs, Assistant Inspector General for Aviation and Special Projects, DOT; Mike Hudson, chairman of the National Academy of Sciences' (NAS) Committee on Technology Pathways; Assessing the Integrated Plan for the NGATS; and, Gerald Dillingham, Director of Civil Aviation Issues at the General Accountability Office (GAO).

In 2003, Congress created the JPDO within the Federal Aviation Administration (FAA) to oversee research and development activities related to air traffic control challenges. The JPDO was created to guide the activities of seven Federal agencies, particularly the Federal Aviation Administration and NASA, as they design and implement a Next Generation Air Transportation System (NGATS).

Witnesses from the GAO, the DOT OIG and National Academy of Sciences raised concerns about whether the JPDO can, over the long-term, clearly establish and enforce research and development priorities, and ensure the various departments and agencies are providing sufficient support. During the hearing, Members of the Subcommittee expressed concern with the JPDO's inability to provide clear research and development objectives, and the lack of a unified budget for research related to development of NGATS. Many of the Members commented that significant technological challenges remain in order to successfully transition from the present Air Traffic Management system to the NGATS. Members also observed that a strong JPDO leader is needed to oversee these research challenges. With respect to NASA's role in supporting the development technologies for the NGATS, the major concern was the declining budget in the out years for the Airspace Systems program. All (100%) of the Airspace Systems program supports NGATS.

Summary of Member Opening Statement:

Congressman Ralph Hall (R-TX) gave a very short opening statement describing why the hearing was being held and how Congress created the JPDO. He also stated that Congressman Vernon Ehlers, who is not on the Subcommittee, has requested to attend the hearing and permission was granted.

Ranking Democrat Mark Udall (D-CO) said there will be significant R&D challenges to transition from the present ATM system to the NGATS. He said the JPDO needs to identify the technologies that need to be developed for NGATS and ensure the agencies in the JPDO are developing these technologies. He also questioned whether the current JPDO organization is the correct one to transition from the planning stage to the execution stage.

Congressman Vernon Ehlers (R-MI) stated that he is on the House Aviation Subcommittee and is a real advocate for the development of the NGATS. He said that Congress has not provided adequate funds to the FAA and DOT for R&D. Congressman Ehlers is less worried about airport capacity than airspace capacity, particularly if the very light jet movement takes off. He said he hopes the general public realizes the importance of developing the NGATS.

Summary of Witness Opening Statements:

The Honorable Jeffrey N. Shane, Under Secretary of the U.S. DOT, testified on the importance of the JPDO and its vital role in fostering the establishment of NGATS. The NGATS initiative is unprecedented in its scope and complexity and the challenges it will face. He stated that the nation has a great air traffic control system today, but the NGATS will be more flexible, resilient, scalable, adaptive, and highly automated than today's system.

Dr. Lisa Porter, Associate Administrator for ARMD testified that ARMD is currently undergoing a comprehensive restructuring to ensure that the strategic plan in place enables NASA to pursue long-term, cutting-edge research for the benefit of a broad aeronautics community. ARMD has interacted closely with the JPDO during the past several months to ensure proper alignment of NASA's research plan with the needs of the NGATS. NASA's entire Airspace Systems program supports NGATS and a significant portion of the Aviation Safety and Fundamental Aeronautics supports NGATS. NASA has aligned its aeronautics research portfolio to meet the challenge with an efficient allocation of resources and unwavering commitment to technical excellence.

Mr. David Dobbs, Assistant Inspector General for Aviation and Special Projects DOT, testified to the effect that the JPDO, since the office was established 2 years ago, has established eight integrated product teams, set up an NGATS institute to interface with industry, and provided Congress with two progress reports. However, the cost and schedule of the next system remains unknown, and considerable work remains to align Agency budgets and plans. His testimony focused on JPDO's critical role in leveraging resources for the NGATS, progress and challenges to date in aligning Agency budgets and plans, and actions that will help the JPDO keep moving forward in both the short-and long-term.

Mr. Mike Hudson chaired a committee for the National Research Council (NRC) on Technology Pathways: Assessing the Integrated Plan for the NGATS, early in 2004. The committee was charged with assessing the first edition of the NGATS integrated plan. The committee concluded the 8 JPDO Integrated product teams (IPT) should be consolidated into three teams which are airport operations, terminal area operations, and en route and oceanic operations. The committee acknowledges that the IPTs will need to address implementation and transition issues.

Dr. Gerald Dillingham, Director of Civil Aviation Issues at the Government Accountability Office, directed a study on the Preliminary Analysis of the JPDO's Planning, Progress, and Challenges. The study concluded that JPDO is implementing a number of practices that the GAO's has shown facilitates collaboration among federal agencies, but faces a challenge in sustaining this collaboration over the long run. The practices include defining and articulating a common outcome, establishing mutually reinforcing or joint strategies to achieve that outcome, and identifying and addressing needs by leveraging resources among partner agencies. The results of the study did recommend that air traffic controllers be incorporated in the JPDO planning activities.

Summary of Major Questions/Concerns:

Rep. Hall asked who is ultimately responsible for the NGATS research. Bob Pearce said that different agencies are responsible for different research areas. For example, NASA is responsible for the ATM research. Under Secretary Jeff Shane said the

Secretary of Transportation was ultimately responsible for NGATS research, but the Senior Policy Committee is very much engaged. Congressman Hall was concerned that there is not a single coordinated budget for the NGATS developments. Rep. Hall asked what Integrated Product Teams (IPT) the NRC study recommended. Mr. Hudson said the study recommended three teams, one on airport operations, one on terminal area operations and another on en route and oceanic operations. Rep. Hall then asked why the JPDO now has eight IPTs. Bob Pearce said that NGATS is more than ATM and other elements of the NGATS such as global harmonizing are not addressed with the three IPTs recommended in the NRC report.

Ranking Democrat Mark Udall (D-CO): said he was not sure that the current JPDO organization is the correct one to transition from the planning stage to the execution stage. He referred to significant R&D challenges to transition from the present ATM system to the NGATS, that the JPDO needs to identify the technologies that need to be developed for NGATS and ensure the agencies in the JPDO are developing these technologies, and asked how the JPDO makes sure the agencies are committed to developing the technologies for the NGATS. Under Secretary Shane replied this is done through the Senior Policy Committee and that prioritization of these developments is very important to the agencies represented there. Congressman Udall asked if JPDO approved it when NASA cut funding for air traffic modernization research almost in half from now through FY 2011. Under Secretary Jeff Shane said the JPDO did not approve the cuts but was notified. Congressman Udall stated that human factors research is very important for NGATS and that security must be built into the NGATS system not added on at the end.

Congressman Vernon Ehlers (R-MI) said that Congress has not provided adequate funds to the FAA and DOT for R&D. He is a strong supporter of NGATS and hopes the general public realizes the importance of developing the NGATS.

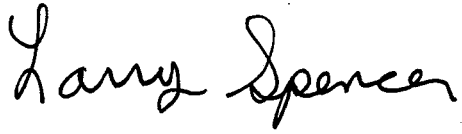
Congresswoman Sheila Jackson Lee (D-TX) said she is very disappointed with the budget cuts to NGATS in the NASA aeronautics budget. Dr. Porter explained that the budget chart used during the aeronautics research program review by the House Science Committee was incorrectly labeled. The chart showed that only a portion of the Airspace Systems program supports NGATS and that is not true. In fact 100% of the Airspace program supports the NGATS. Also, a major portion of the aviation safety program and a portion of the Fundamental Aeronautics program support NGATS. Research conducted in the Fundamental Aeronautics program will help improve aircraft efficiency, make aircraft quieter and reduce the emissions coming from aircraft. Congresswoman Jackson Lee urged that air traffic controllers be integrated in the JPDO.

Requests for Information:

1. Congresswoman Sheila Jackson Lee requested a more detailed response to the budget decline with respect to NGATS. She would like to have information on what is being funded and specifically in Aviation Safety. Also, she would like to see a timeline for this research.

A copy of the Dr. Lisa Porter's written testimony can be found at the Office of Legislative Affairs website at <http://legislative.nasa.gov/>

The hearing charter, Rep. Ralph Hall's opening statements, and the witnesses testimonies can be found at <http://www.house.gov/science/hearings/space06/march%2029/index.htm>

A handwritten signature in black ink that reads "Larry Spencer". The signature is written in a cursive style with a large, stylized "L" and "S".

Larry Spencer
Legislative Affairs Specialist
Office of Legislative Affairs

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